

```

18 19 20
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
ring/chain nodes :
21
chain bonds :
15-19 16-20 17-18 20-21
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 7-15 8-9 8-17 9-10 9-11 10-14
11-12 12-13 13-14 15-16 16-17
exact/norm bonds :
1-2 1-6 2-3 3-4 4-5 7-15 8-17 15-16 15-19 16-17 17-18
exact bonds :
16-20 20-21
normalized bonds :
5-6 5-7 6-10 7-8 8-9 9-10 9-11 10-14 11-12 12-13 13-14

```

Match level :

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1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:CLASS 19:CLASS
20:CLASS 21:CLASS

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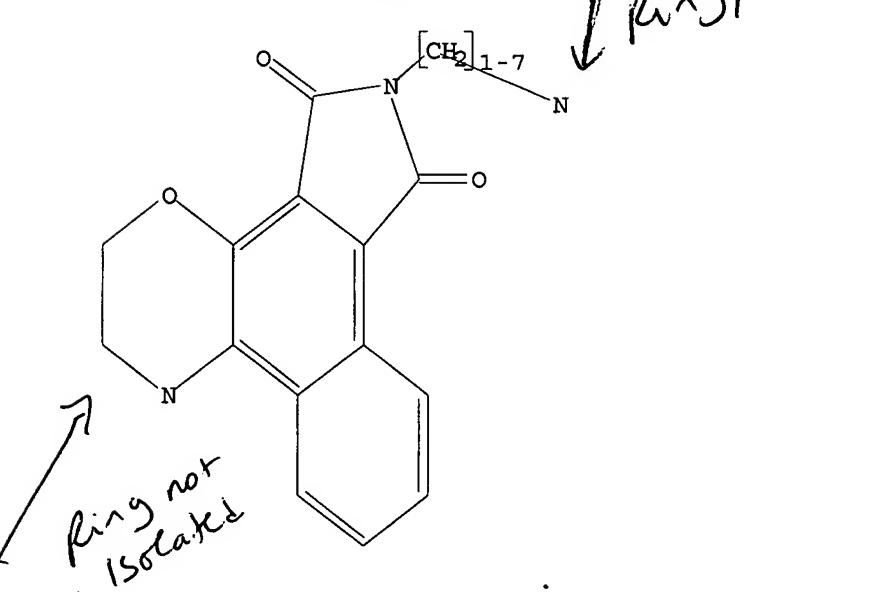
Broad Search

L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11

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SAMPLE SEARCH INITIATED 08:12:27 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -          0 TO ITERATE

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100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 0 TO 0
 PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s 11 sss full
 FULL SEARCH INITIATED 08:12:36 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 13 TO ITERATE

100.0% PROCESSED 13 ITERATIONS 11 ANSWERS
 SEARCH TIME: 00.00.01

L3 11 SEA SSS FUL L1

=> file caplus
 COST IN U.S. DOLLARS SINCE FILE TOTAL
 FULL ESTIMATED COST ENTRY SESSION
 172.10 172.31

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 FILE LAST UPDATED: 20 May 2007 (20070520/ED)

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 L4 1 L3

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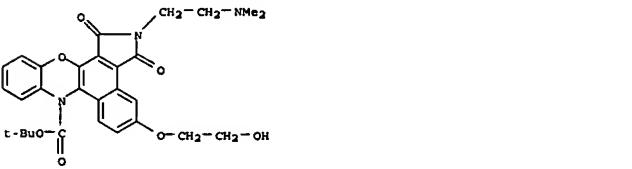
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 ACCESSION NUMBER: 2004:329922 CAPLUS
 DOCUMENT NUMBER: 140:339334
 TITLE: Preparation of benzo[e][1,4]oxazino[3,2-g]isoindoles as antitumor agents for treating leukemia and solid tumors
 INVENTOR(S): Couderc, Gerard; Lepifre, Franck; Caignard, Daniel; Henri; Renard, Pierre; Hickman, John; Pierre, Alain; Kraus, Berthier Laurence
 PATENT ASSIGNEE(S): Les Laboratoires Servier, Pr.
 SOURCE: Pr. Demande, 43 pp.
 CODEN: FRXXBL
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2845994	A1	20040423	FR 2002-12964	20021018
FR 2845994	B1	20060519		
CA 2502484	A1	20040506	CA 2003-2502484	20031017
WO 200407830	A1	20040506	WO 2003-PR3068	20031017
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, C2, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BP, BJ, CF, CG, CI, CM, GA, GN, GO, GM, ML, MR, NE, SN, TD, TG				
AU 2003101511	A1	20040513	AU 2003-101511	20031017
EP 1556387	A1	20050727	EP 2003-809362	20031017
EP 1556387	B1	20070404		
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BR 2003014877	A	20050802	BR 2003-14877	20031017
CN 1705669	A	20051207	CN 2003-80101542	20031017
JP 2006506375	T	20060223	JP 2004-546097	20031017
AT 358627	T	20070415	AT 2003-809362	20031017
US 2006003997	A1	20060105	US 2005-531648	20050415
NO 2005002373	A	20050513	NO 2005-2373	20050513
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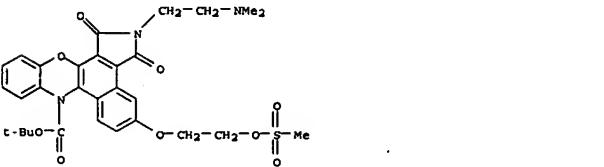
OTHER SOURCE(S): MARPAT 140:339344
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 680596-91-2 CAPLUS
 CN Benzo[a]pyrrolo[3,4-c]phenoxazine-8(1H)-carboxylic acid, 2-[2-(dimethylamino)ethyl]-2,3-dihydro-5-[2-[(methylsulfonyl)oxy]ethoxy]-1,3-dioxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



IT 680596-88-7P 680596-92-3P 680596-93-4P, 2-(2-(Dimethylamino)ethyl)-5-(2-hydroxyethoxy)benzo[a]pyrrolo[3,4-c]phenoxazine-1,3-dione 680596-94-5P, 8-(Formyl)-2-(2-(dimethylamino)ethyl)-5-(2-hydroxyethoxy)benzo[a]pyrrolo[3,4-c]phenoxazine-1,3-dione 680596-98-9P 680596-99-0P 680597-00-6P 680597-01-7P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (antitumor agent; preparation of benzo[e][1,4]oxazino[3,2-g]isoindoles as antitumor agents for treating leukemia and solid tumors)

RN 680596-88-7 CAPLUS
 CN Benzo[a]pyrrolo[3,4-c]phenoxazine-1,3(2H,8H)-dione, 2-[2-(dimethylamino)ethyl]-5-hydroxy-, monohydrochloride (9CI) (CA INDEX NAME)

Habte

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 AB Title compd. I [wherein CMC = Ph, pyridinyl; Z = H, halo, aryl/alkyl, aryl, aryloxy, OH and derive.; R1 = H, aryl/alkyl, aryl, CHO and derive., (un)substituted alkylene; R2 = H, aryl/alkyl, aryl, S(O)2H, aryl, or R3R4N = 5 or 6-membered ring heterocycle; t = 0-2; R3, R4 = independently H, aryl/alkyl, enantiomers, diastereomers, N-oxides, and their salts of addition with a pharmaceutically acceptable acid or base] were prepared as antitumor agents.

Thus, tert-Bu 2,3-dihydro-4H-1,4-benzoxazin-3-one-4-carboxylate reacted with 8-(Pinacolboronyl)-1,4-dioxaspiro[4.5]dec-7-ene, followed by cycloaddn. with di-Me acetylenedicarboxylate, reduction, and deprotection to give the ketone II. Boc-protection of the enol, dehydrogenation in the presence of 2,3-dichloro-5,6-dicyano-1,4-benzoquinone, O-Boc-deprotection, cyclocondensation with N,N-dimethylmethylenediamine, and

N-Boc-deprotection in the presence of HCl gave the hydrochloride III+HCl. III+HCl displayed an IC50 1uM for inhibition of certain human cell proliferation. I are useful for treating leukemia and solid neoplasm.

IT 680596-80-9P 680596-89-8P 680596-91-2P
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(antitumor agent; preparation of benzo[e][1,4]oxazino[3,2-g]isoindoles as antitumor agents for treating leukemia and solid tumors)

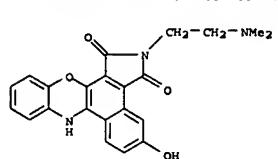
RN 680596-80-9 CAPLUS

CN Benzo[a]pyrrolo[3,4-c]phenoxazine-8(1H)-carboxylic acid,

2-[2-(dimethylamino)ethyl]-2,3-dihydro-5-(2-hydroxyethoxy)-1,3-dioxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

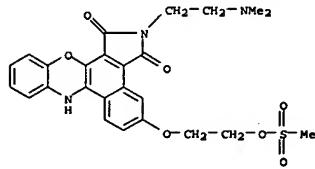


L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

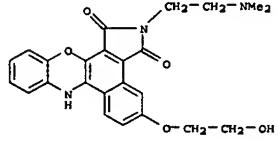


● HC1

RN 680596-92-3 CAPLUS
 CN Benzo[a]pyrrolo[3,4-c]phenoxazine-1,3(2H,8H)-dione, 2-[2-(dimethylamino)ethyl]-5-[2-[(methylsulfonyl)oxy]ethoxy]- (9CI) (CA INDEX NAME)



RN 680596-93-4 CAPLUS
 CN Benzo[a]pyrrolo[3,4-c]phenoxazine-1,3(2H,8H)-dione, 2-[2-(dimethylamino)ethyl]-5-(2-hydroxyethoxy)- (9CI) (CA INDEX NAME)

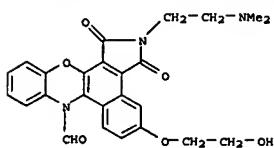


RN 680596-94-5 CAPLUS
 CN Benzo[a]pyrrolo[3,4-c]phenoxazine-8(1H)-carboxaldehyde, 2-[2-(dimethylamino)ethyl]-2,3-dihydro-5-(2-hydroxyethoxy)-1,3-dioxo- (9CI) (CA INDEX NAME)

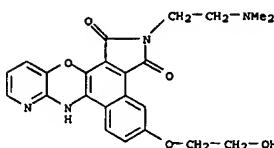
05/21/2007

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

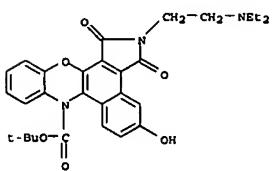
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RN 680596-98-9 CAPLUS
 CN Benzo[f]pyrido[3,2-b]pyrrolo[3,4-h] (1,4)benzoxazine-1,3 (2H,8H)-dione,
 2- (2- (dimethylamino)ethyl)-5- (2-hydroxyethoxy)- (9CI) (CA INDEX NAME)



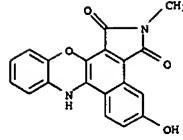
RN 680596-99-0 CAPLUS
 CN Benzo[a]pyrrolo[3,4-c]phenoxazine-8 (1H)-carboxylic acid,
 2- (2- (dimethylamino)ethyl)-2,3-dihydro-5-hydroxy-1,3-dioxo-
 1,1-dimethyl ester (9CI) (CA INDEX NAME)



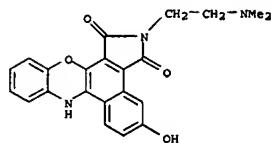
RN 680597-00-6 CAPLUS
 CN Benzo[a]pyrrolo[3,4-c]phenoxazine-1,3 (2H,8H)-dione, 2- (2-
 (diethylamino)ethyl)-5-hydroxy- (9CI) (CA INDEX NAME)

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

CH2-CH2-NEt2



RN 680597-01-7 CAPLUS
 CN Benzo[a]pyrrolo[3,4-c]phenoxazine-1,3 (2H,8H)-dione, 2- (2-
 (dimethylamino)ethyl)-5-hydroxy- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS
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